

1/1 DWPX - (C) Thomson Derwent

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TI - Photometric arrangement for attenuation measurement in disperse media - has cuvette measurement and reference light conductors, d.c. light detector
DC - S03
PA - (BADI) BASF AG
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AP: 1990DE-4024420 19900801
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The photometric arrangement for measuring the attenuation of light propagation in disperse systems contains a cuvette (1) carrying the test medium with at least one lateral opening (2) for optical connection of an optical cable (LWL) between a light source (4) and detector (5) for measurement signal generation. A reference signal is generated using a direct optical cable connection (LWL Rf).

- The optical cable protrudes directly through the lateral opening into the interior of the cuvette. A d.c. light detector with a sensitivity between 20 pW/V and 2 mW/V for an output voltage between 0 and 13 Volts and a noise component less than 1 mV is

used.

- USE/ADVANTAGE - For colour pigment measurement. Minimum optical boundary surfaces, high degree of sensitivity. (9pp Dwg.No.1/7)

EPAB- EP-472899 B

A photometric instrument for measuring the degree of attenuation in the propagation of light in disperse systems, comprising a through-flow cell (1) for the sample to be measured, having one or more lateral apertures (2) for optical coupling of one or more optical waveguides (OWGs) of an optical waveguide connection between a light source (4) into the interior of the cell and from there to a light detector (5), to the interior of the cell for producing a measurement signal, the optical waveguide (OWG) projecting through the lateral aperture (2) directly into the interior of the cell (1), and comprising a direct optical waveguide connection (OWG Rf) for producing a reference signal and an evaluation unit (8) connected to the light detector (5) the system comprising the light source, light detector and evaluation until not being pulsed, wherein the light detector (5) is a two-stage amplifier (OP1, OP2) whose input is connected to PIN diodes (6) as receivers for the optical waveguide signals, the first amplifier stage (OP1) having a negative feedback network which can be switched over up to a very high impedance resistance, and the second amplifier stage (OP2) having a negative feedback network

which limits the frequency response by means at various capacitances (C) which can be connected into the circuit, so that a sensitivity of up to 20pW/V and a noise level of less than 1mV can be achieved at an input voltage of from 0 to 13V. (Dwg.1/7)